



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	ELKHORN, WI	<b>Accident Number:</b>	CHI90MA244
<b>Date &amp; Time:</b>	08/27/1990, 0100 CDT	<b>Registration:</b>	N16933
<b>Aircraft:</b>	BELL 206B	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	5 Fatal
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

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## Analysis

FOUR HELICOPTERS WERE BEING USED AT NIGHT TO TRANSPORT A CONCERT GROUP FROM A GOLF COURSE AREA NEAR ELKHORN, WI, TO CHICAGO, IL. AS THE THIRD HELICOPTER (N16933) WAS DEPARTING, IT REMAINED AT A LOWER ALTITUDE THAN THE OTHERS, AND THE PILOT TURNED SOUTHEASTERLY TOWARD RISING TERRAIN. SUBSEQUENTLY, THE HELICOPTER CRASHED ON HILLY TERRAIN ABOUT 3/5 MI FROM THE TAKEOFF POINT. ELEVATION OF THE CRASH SITE WAS ABOUT 100 FT ABOVE THE GOLF COURSE AND 50 FT BELOW THE SUMMIT OF THE HILL. NO PREIMPACT PART FAILURE OR MALFUNCTION WAS FOUND DURING THE INVESTIGATION. PILOTS OF THE OTHER HELICOPTERS REPORTED VFR FLIGHT CONDITIONS WITH SOME FOG. A GROUND WITNESS NEAR THE CRASH SITE REPORTED HAZE AND GROUND FOG OF VARYING INTENSITY WITH PATCHES OF LOW CLOUDS, BUT SAID STARS COULD BE SEEN THROUGH THE FOG.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: IMPROPER PLANNING/DECISION BY THE PILOT, AND HIS FAILURE TO ATTAIN ADEQUATE ALTITUDE BEFORE FLYING OVER RISING TERRAIN AT NIGHT. FACTORS RELATED TO THE ACCIDENT WERE: DARKNESS, FOG, HAZE, RISING TERRAIN, AND THE LACK OF VISUAL CUES THAT WERE AVAILABLE TO THE PILOT.

## Findings

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Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (C) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
2. (F) LIGHT CONDITION - DARK NIGHT
3. (F) WEATHER CONDITION - FOG
4. (F) WEATHER CONDITION - HAZE/SMOKE
5. (F) TERRAIN CONDITION - RISING
6. (C) PROPER ALTITUDE - NOT ATTAINED - PILOT IN COMMAND
7. (F) VISUAL/AURAL PERCEPTION - PILOT IN COMMAND

## Factual Information

### Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	42, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	07/11/1990
<b>Occupational Pilot:</b>	<b>Last Flight Review or Equivalent:</b>		
<b>Flight Time:</b>	5043 hours (Total, all aircraft), 1540 hours (Total, this make and model), 4609 hours (Pilot In Command, all aircraft), 264 hours (Last 90 days, all aircraft), 73 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N16933
<b>Model/Series:</b>	206B 206B	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	2338
<b>Landing Gear Type:</b>	High Skid	<b>Seats:</b>	5
<b>Date/Type of Last Inspection:</b>	08/08/1990, AAIP	<b>Certified Max Gross Wt.:</b>	3200 lbs
<b>Time Since Last Inspection:</b>	36 Hours	<b>Engines:</b>	1 Turbo Shaft
<b>Airframe Total Time:</b>	7018 Hours	<b>Engine Manufacturer:</b>	ALLISON
<b>ELT:</b>	Installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	250-C20B
<b>Registered Owner:</b>	OMNIFLIGHT HELICOPTERS	<b>Rated Power:</b>	317 hp
<b>Operator:</b>	OMNIFLIGHT HELICOPTERS	<b>Operating Certificate(s) Held:</b>	On-demand Air Taxi (135)

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Unknown	Condition of Light:	Night/Dark
Observation Facility, Elevation:	MKE, 723 ft msl	Distance from Accident Site:	23 Nautical Miles
Observation Time:	0050 CDT	Direction from Accident Site:	60°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	0 Miles
Lowest Ceiling:	Unknown / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:	CHICAGO, IL (MDW)	Type of Clearance:	None
Departure Time:	0100 CDT	Type of Airspace:	Class G

## Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	4 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	5 Fatal	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	WILLIAM C BRUCE	Report Date:	09/11/1992
Additional Participating Persons:			
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).